



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/619,665	07/19/2000	Shigeto Kamata	684.3049	2162

5514 7590 04/03/2002

FITZPATRICK CELLA HARPER & SCINTO  
30 ROCKEFELLER PLAZA  
NEW YORK, NY 10112

EXAMINER

MULLINS, BURTON S

ART UNIT	PAPER NUMBER
----------	--------------

2834

DATE MAILED: 04/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/619,665

Applicant(s)

KAMATA ET AL.

Examiner

Burton S. Mullins

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 1 and 6-8 recitation “with respect to the driving direction” is vague and indefinite and makes no sense. Does this refer to “the coil [attached] to the jacket” or “the coil...sandwiched by the comb-shaped member?” What does it mean to be “attached” or “sandwiched” with respect to the driving direction? In claim 9, recitation “wherein a cooling medium flows through an inside space of said jacket” is redundant. See claim 1.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Art Unit: 2834

3. Claims 1-3, 5-9, 11-15 and 17-26, as best understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Kamata et al. (US 6,084,319). Kamata teaches a linear motor comprising a magnet 41a (Fig.3); a coil 42a; and a jacket 42b having an inside or "reinforcement" member 8 (Figs.5,8,10-11&13) that is comb-shaped (Fig.13) with teeth extending along a driving direction (Figs.12-13), wherein the coil is engaged by the teeth (Figs.12-13&15) and wherein a cooling medium flows through the inside of the jacket (c.5, lines 57-65; Fig.4).

Regarding claim 2, as best understood, note the pillars (Fig.11) holding the coils so that it "floats."

Regarding claim 3, as best understood, note partially-overlapped coils of the embodiments in Figs.15-16 (c.11, line 24+).

Regarding claim 5, the jacket serves as a guide since the movable element 41 (Fig.2) moves relative to the jacket.

Regarding claims 6-7, 17-19 and 24-25, as best understood, the device of Kamata drives a movable stage 121 of an exposure apparatus including illumination system 127 (Fig.17; c.12, lines 20+). The reinforcement members 8a', 8b', etc. extend parallel to the driving direction (Fig.10-12) in the sense that they are arranged one after the other in the driving direction.

Regarding claim 11, the reinforcement members 8a', 8b', etc. do not interfere with the relative motion of the magnet and coil since they are inside the jacket.

Regarding claims 12 and 14, it is evident from Fig.8 that the reinforcement members 8a', 8b', etc. may be made of the same material as the jacket, i.e., ceramics or a resin (c.2, line 66-c.3, line 1; c.3, lines 13-15; c.7, lines 3-7).

Regarding claim 13, as evident upon comparison of Fig.5 with, e.g., Figs.10-11, the integral reinforcement members comprise protruded shapes adjacent a portion of the jacket where the magnets and coil oppose one another.

Regarding claim 15, as seen in the embodiment of Fig.10, a fixing means 7 spaces the coil 1 from the jacket and integral reinforcement members.

Regarding claims 8, 19 and 26, the method of applying photosensitive material to a substrate, exposing the substrate using the movable stage, and developing the exposed substrate is taught at c.12, line 59-c.13, line 23 (Figs.17-19).

Regarding claim 20, Kamata teaches a linear motor including magnets 3 (Fig.5) and coil holder or "jacket" 14 (Fig.10) formed in a comb-shape and having plural protrusions formed along a direction of relative movement between the magnet and coil (Figs.12-13&15-16).

***Allowable Subject Matter***

4. Claims 4, 10 and 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art does not teach a jacket with a central portion of small thickness and a recessed portion on the outside of the jacket which reinforces the central portion, with bent end portion of the coils disposed at the recessed

portion (claim 4); or a reinforcement portion on the outside face of the jacket which extends parallel to the driving direction (claim 10); or a recessed portion on at least the upper or lower half of a section of the jacket when viewed in cross-section (claim 16).

### *Response to Arguments*

5. Applicant's arguments filed 2-19-02 have been fully considered but they are not persuasive. Applicant supplies no argument other than stating that Kamata does not teach a linear motor whose coil is attached to a jacket while being sandwiched by a comb-shaped member of the jacket with respect to the driving direction. The examiner notes that in fact Kamata appears to teach a linear motor whose coil 1 (Fig.10) is attached to a jacket (14/14') while being sandwiched by a comb-shaped member comprising reinforcement members 8a', 8b', etc. (Figs.12-13&15-16) integral with the jacket and arranged in a row parallel with respect to the driving direction (Figs.12&15).

### *Conclusion*

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory

Art Unit: 2834

period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 305-7063. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 305-1341 for regular communications and 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.



Burton S. Mullins  
Primary Examiner  
Art Unit 2834

bsm  
April 2, 2002